

INSTRUMENT PREPARED BY
VIRGINIA GAS AND OIL

ORDER RECORDED UNDER CODE
OF VIRGINIA SECTION 45.1-361.26

VIRGINIA:

BEFORE THE VIRGINIA GAS AND OIL BOARD

APPLICANT: RANGE RESOURCES - PMI

VIRGINIA GAS AND
OIL BOARD
VGOB DOCKET NO.:
89-0126-0009-84

RELIEF SOUGHT:

MODIFICATION OF THE OGCB NORA GAS
FIELD RULES ORDER, ENTERED MARCH 26,
1989, AS AMENDED, TO ALLOW MORE THAN
ONE COALBED GAS WELL TO BE DRILLED IN
THE UNITS IDENTIFIED ON EXHIBIT "A" HERETO

LEGAL DESCRIPTION:

DRILLING UNITS: 69AZ, 69BA, 69BB, 70AZ, 70BA,
70BB, 71AZ, 71BA, 71BB, 72AZ, 72BA, 72BB, 73AZ,
73BA, 73BB, 58AU, 58AV, 58AW, 59AU, 59AV, 59AW,
60AUN 60AV, 60AW, 61AV, 61AW, 70BM, 70BN,
70BO, 71BM, 71BN, 71BO, 72BM, 72BN, 72BO, 82AW,
82AX, & 82AY, LOCATED IN BUCNANAN &
DICKENSON COUNTIES, VIRGINIA;
SEE ANNEXED EXHIBIT "H2"

**REPORT OF THE BOARD
FINDINGS AND ORDER**

1. Hearing Date and Place: This matter came on for hearing before the Virginia Gas and Oil Board (hereinafter "Board") at 9:00 a.m. on August 18, 2015 at the Conference Center at the Russell County Office Facility, Lebanon, Virginia.
2. Appearances: James E. Kaiser of Wilhoit and Kaiser, appeared for the Applicant; and Paul Kugelman, Jr., Senior Assistant Attorney General was present to advise the Board.
3. Jurisdiction and Notice: Pursuant to Va. Code §§45.1-361.1 et seq., as amended, the Board finds that it has jurisdiction over the subject matter. Based upon the

evidence presented by the Applicant, the Board also finds that the Applicant has (1) exercised due diligence in conducting a meaningful search of reasonably available sources to determine the identity and whereabouts of each gas and oil owner, coal owner, or mineral owner, or in the case of conflicting claims to the ownership of the coalbed methane gas, each person identified by Applicant as a potential owner of the coalbed methane gas underlying the area described at paragraph 7.h below and in **Exhibit "B"** attached hereto; and (2) has given notice to all parties so identified (hereinafter sometimes "person(s)" whether referring to individuals, corporation, partnerships, associations, companies, businesses, trusts, joint ventures or other legal entities) and entitled by §§ 45.1-361.19 and 45.1-361.20, Virginia Code, as amended, to notice of the Application, and (3) that the persons listed in the Notice of Hearing are the persons so identified by the Applicant. Further, the Board has caused notice of this hearing to be published as required by § 45.1-361.19.B., Virginia Code, as amended. Whereupon, the Board hereby finds that the notices given satisfy all statutory requirements, Board rule requirements and the minimum standards of State due process.

4. Amendments and Dismissals: None.

5. Relief Requested: (1) Modification of the Nora Gas Field Rules to allow more than one coalbed methane gas well to be drilled within each of the Nora Field Drilling Units identified above and in **Exhibit "H2"** attached hereto; and (2) for an administrative order providing that additional well permits may be issued in the Nora Field after the Application is filed and while it is pending.

6. Relief Granted: Available data and the evidence adduced at the hearing support Applicant's position that the production from the pool underlying the Nora Coal Bed Gas Field Drilling Units in question would be enhanced and benefit from in-field drilling; accordingly,

a. With regard to the Drilling Units described above and in **Exhibit "H2"** hereto, the Nora Coal Bed Gas Field Rules Order, OCGB order entered of March 26, 1989, is hereby amended to allow the Board's Designated Unit Operator in Drilling Units pooled by Board Order and the Well Operator/Permittee in voluntary Drilling Units to drill a total of two (2) wells, said total to include any previously permitted well(s), within the units affected by the Application and this Order;

b. In the event that an additional coalbed methane gas well(s) permitted and drilled after the entry of this order is located within the drilling window(s) of a Nora Coal Bed Gas Field Drilling Unit affected by this order, the production therefrom shall be solely attributed to and allocated to the Nora Drilling Unit within which the wells are located.

c. In the event a second well is proposed that is to be located outside the drilling window of any Nora Unit affected by this order and a permit application is submitted to the Division of Gas and Oil seeking such location exception, the

Inspector shall assess the permit as follows:

- (i) If a 58 acre square with the proposed well at its center lies entirely within Nora Drilling Units which are voluntary in nature and are not subject to existing pooling order, the Inspector may grant or deny the location exception on a case-by-case basis according to standard procedures and provisions of the Nora Order which allow wells to be drilled outside the drilling windows; or
- (ii) If a 58 acre square with the proposed well at its center lies entirely or partially within any Nora Drilling Unit(s) which is subject to existing pooling orders, the Inspector shall refer the permit application to the Board for its recommendations concerning correlative rights considerations, modification of pooling orders, and escrow provisions. Alternatively, the Unit Operator may present a pooling proposal directly to the Board prior to filing a permit application. No permit under this paragraph (ii) shall be issued until the Board has acted on the matter.

7. Special Findings:

- a. Applicant's proposed field rule modification is not an unreasonable or arbitrary exercise of the owner's right to explore for or produce gas;
- b. The Applicant's proposal would not unreasonably interfere with the present or future mining of coal or other minerals;
- c. The acreage to be embraced in the Drilling Units affected by and/or created by this Modification Order shall be as set forth above and in **Exhibit "H2"** attached hereto.
- d. The formations subject to this Modification Order are described in the OGCB Order entered March 26, 1989, as amended.
- e. The boundaries of the Drilling Units are the same as heretofore established by the OGCB Order entered March 26, 1989, as amended.
- f. Unit Operator's production simulations indicate that drilling of an additional well in each Unit could facilitate the recovery of an additional 250,000 MCF of gas per Unit within ten (10) years of drilling.
- g. The boundaries of any Drilling Units created subsequent to this Modification Order shall be according to paragraph 6.c.ii. above and as defined by Board action specific to individual units.
- h. The acreage subject to this Modification Order is depicted in **Exhibit "H2"** attached hereto;

150001424

- i. Having considered the evidence presented, the Board found no reason to establish any allowable production rates for the wells contemplated by this Modification Order;
 - j. Except as herein specifically modified, the proposed Drilling Units in **Exhibit "H2"** shall be developed and produced in compliance with the OGCB Order entered on March 26, 1989 regarding the Nora Gas Field Rules, as amended.
 - k. This Modification Order shall be effective as of the date of the hearing, to wit: **August 18, 2015.**
8. Conclusion: The relief granted hereby will assist in enhancing production from existing wells, will assist in more efficiently recovering coalbed methane gas from the area in question, prevent waste by more effectively extracting the resource, and will continue to protect the correlative rights of all owners and claimants. Therefore, the relief and all terms and provisions set forth above be and are hereby granted and IT IS SO ORDERED.
9. Effective Date: **August 18, 2015.**

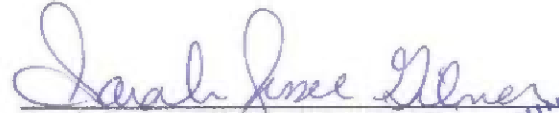
DONE AND EXECUTED this 20th day of August, 2015 by a majority of the Virginia Gas and Oil Board.



Chairman, Bradley C. Lambert

COMMONWEALTH OF VIRGINIA
COUNTY OF RUSSELL

Acknowledged on this 20th day of August, 2015, personally before me a notary public in and for the Commonwealth of Virginia, appeared Bradley C. Lambert, being duly sworn did depose and say that he is the Chairman of the Virginia Gas and Oil Board, that he executed the same and was authorized to do so.



Sarah Jessee Gilmer, Notary Public
262946

My Commission expires: July 31, 2017

DONE AND PERFORMED this 25 day of August, 2015 by Order of the Virginia Gas and Oil Board.




Rick Cooper
Principal Executive to the
staff, Virginia Gas and Oil Board

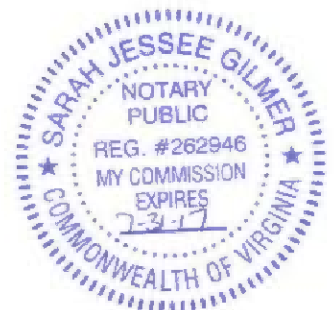
COMMONWEALTH OF VIRGINIA
COUNTY OF RUSSELL

Acknowledged on this 25th day of August, 2015, personally before me a notary public in and for the Commonwealth of Virginia, appeared Rick Cooper, being duly sworn did depose and say that he is the Principal Executive to the staff of the Virginia Gas and Oil Board, that he executed the same and was authorized to do so.



Sarah Jessee Gilmer, Notary Public
262946

My Commission expires: July 31, 2017



67AY	68AY	69AY	70AY	71AY	72AY	73AY	74AY	75AY	76AY
67AZ	68AZ	69AZ	70AZ	71AZ	72AZ	73AZ	74AZ	75AZ	76AZ
67BA	68BA	69BA	70BA	71BA	72BA	73BA	74BA	75BA	76BA
67BB	68BB	69BB	70BB	71BB	72BB	73BB	74BB	75BB	76BB
67BC	68BC	69BC	70BC	71BC	72BC	73BC	74BC	75BC	76BC
67BD	68BD	69BD	70BD	71BD	72BD	73BD	74BD	75BD	76BD
67BE	68BE	69BE	70BE	71BE	72BE	73BE	74BE	75BE	76BE
Dickenson County									

PROPOSED UNITS

APPROVED UNITS

EXHIBIT H-2 (page 1)
 RANGE RESOURCES - PINE MOUNTAIN INC.
 INCREASED DENSITY DRILLING
 NORA FIELD
 7/7/2015

150001424

55AS	56AS	57AS	58AS	59AS	60AS	61AS	62AS	63AS
55AT	56AT	57AT	58AT	59AT	60AT	61AT	62AT	63AT
55AU	56AU	57AU	58AU	59AU	60AU	61AU	62AU	63AU
55AV	56AV	57AV	58AV	59AV	60AV	61AV	62AV	63AV
55AW	56AW	57AW	58AW	59AW	60AW	61AW	62AW	63AW
55AX	56AX	57AX	58AX	59AX	60AX	61AX	62AX	63AX
Dickenson County								

APPROVED UNITS

PROPOSED UNITS

EXHIBIT H-2 (page 2)
RANGE RESOURCES - PINE MOUNTAIN INC.
INCREASED DENSITY DRILLING
NORA FIELD
7/7/2015

65BR	66BJ	67BJ	68BJ	69BJ	70BJ	71BJ	72BJ	73BJ	74BJ	75BJ	76BJ	77BJ	78BJ
65BK	66BK	67BK	68BK	69BK	70BK	71BK	72BK	73BK	74BK	75BK	76BK	77BK	78BK
65BL	66BL	67BL	68BL	69BL	70BL	71BL	72BL	73BL	74BL	75BL	76BL	77BL	78BL
65BN	66BN	67BN	68BN	69BN	70BN	71BN	72BN	73BN	74BN	75BN	76BN	77BN	78BN
65BO	66BO	67BO	68BO	69BO	70BO	71BO	72BO	73BO	74BO	75BO	76BO	77BO	78BO
65BP	66BP	67BP	68BP	69BP	70BP	71BP	72BP	73BP	74BP	75BP	76BP	77BP	78BP
65BQ	66BQ	67BQ	68BQ	69BQ	70BQ	71BQ	72BQ	73BQ	74BQ	75BQ	76BQ	77BQ	78BQ
Dickenson County	Dickenson County	Dickenson County	Dickenson County	Dickenson County	Dickenson County	Dickenson County	Dickenson County	Dickenson County	Dickenson County	Dickenson County	Dickenson County	Dickenson County	Dickenson County

PROPOSED UNITS

APPROVED UNITS

EXHIBIT H-2 (page 3)
 RANGE RESOURCES - PINE MOUNTAIN INC.
 INCREASED DENSITY DRILLING
 NORA FIELD
 7/7/2015

Page Number 9.

Exhibit "B"
VGOB 89-0126-0009-84

Dickenson-Russell Coal Company
Maxxim Shared Services, LLC
Attn: Steve Smith
5703 Crutchfield Drive
Norton, VA 24273

ALPHA Land & Reserves, LLC
Attn: Steve Smith
5703 Crutchfield Drive
Norton, VA 24273

WBRD LLC
Chad Mooney
5260 Irwin Road
Huntington, WV 25705-3247

ACIN LLC
Chad Mooney
5260 Irwin Road
Huntington, WV 25705-3247

Carol P. Armstrong &
Raymond R. Armstrong, W/H
12612 Celtic Court
Rockville, MD 20850-3769

Connie Counts Godfrey
1280 W Oro Grande Drive
Pueblo West, CO 81007-6122

Charles & Kathryn Counts
48359 Silver Lake Road
Macomb, MI 48042

Cheri Lyn Simonenko
5302 Huepers Street
Alvin, TX 77511

Nicole Lyn Simonenko-Connolly
5302 Huepers Street
Alvin, TX 77511

Donna Grizzle
1355 Nancy Hollow
Haysi, VA 24256-5117

Exhibit "B"
VGOB 89-0126-0009-84

Michael Carson Price
PO Box 27
Davenport, VA 24293

Mountain Mission School Inc
1760 Edgewater Drive
Grundy, VA 24614

Virginia P & Philip G Linwick
4324 South Ball Drive
Veradale, WA 99037

John W Pobst Jr
PO Box 86
Revere, PA 18953

Richard K & Katherine Pobst
1024 Oxford Drive
St Augustine, FL 32084

Catherine Pobst
111 Postelle Street
Cartersville, GA 30120

Meredith Iqbal Jennings
542 Butler Mill Road
Maryville, TN 37803

AY	67AY	68AY	69AY	70AY	71AY	72AY	73AY	74AY	75AY	76AY
AZ	67AZ	68AZ	69AZ	70AZ	71AZ	72AZ	73AZ	74AZ	75AZ	76AZ
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C	67BC	68BC	69BC	70BC	71BC	72BC	73BC	74BC	75BC	76BC
D	67BD	68BD	69BD	70BD	71BD	72BD	73BD	74BD	75BD	76BD
E	67BE	68BE	69BE	70BE	71BE	72BE	73BE	74BE	75BE	76BE

PROPOSED UNITS

APPROVED UNITS

Dickenson County

EXHIBIT K (page 1)

RANGE RESOURCES - PINE MOUNTAIN INC.
INCREASED DENSITY DRILLING
NORA FIELD
7/7/2015

55AS	56AS	57AS	58AS	59AS	60AS	61AS	62AS	63AS
55AT	56AT	57AT	58AT	59AT	60AT	61AT	62AT	63AT
55AU	56AU	57AU	58AU	59AU	60AU	61AU	62AU	63AU
55AV	56AV	57AV	58AV	59AV	60AV	61AV	62AV	63AV
55AW	56AW	57AW	58AW	59AW	60AW	61AW	62AW	63AW
55AX	56AX	57AX	58AX	59AX	60AX	61AX	62AX	63AX
Dickenson County								
Y	56AY							

APPROVED UNITS



PROPOSED UNITS



EXHIBIT K (page 2)

RANGE RESOURCES - PINE MOUNTAIN INC.

INCREASED DENSITY DRILLING

NORA FIELD

7/7/2015



EXHIBIT K (page 3)

RANGE RESOURCES - PINE MOUNTAIN INC.
INCREASED DENSITY DRILLING
NORA FIELD
7/7/2015



EXHIBIT K (page 4)

RANGE RESOURCES - PINE MOUNTAIN INC.
INCREASED DENSITY DRILLING
NORA FIELD
7/7/2015

Map View of Nora CBM Field Increased Density Drilling Previously Board Approved

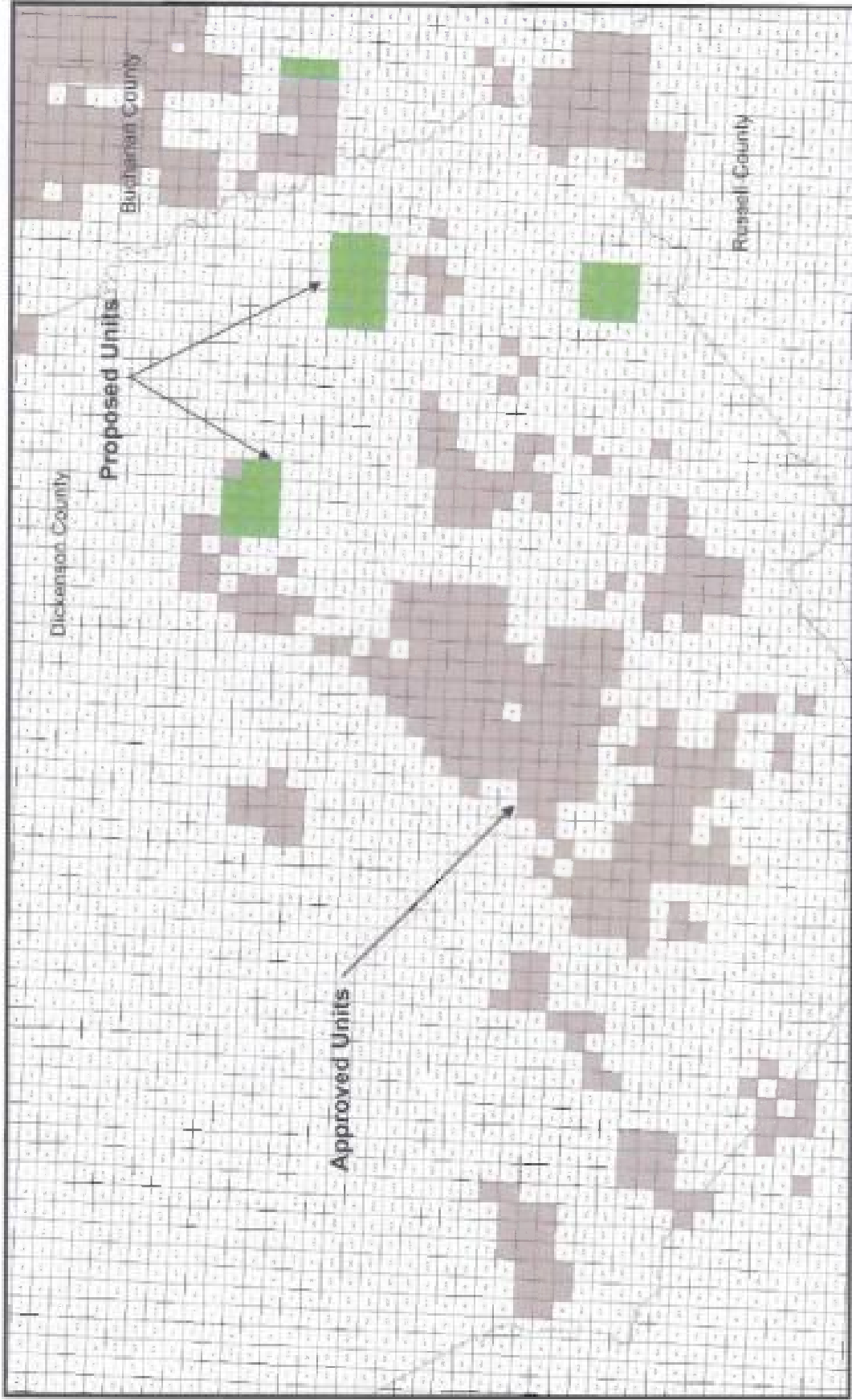


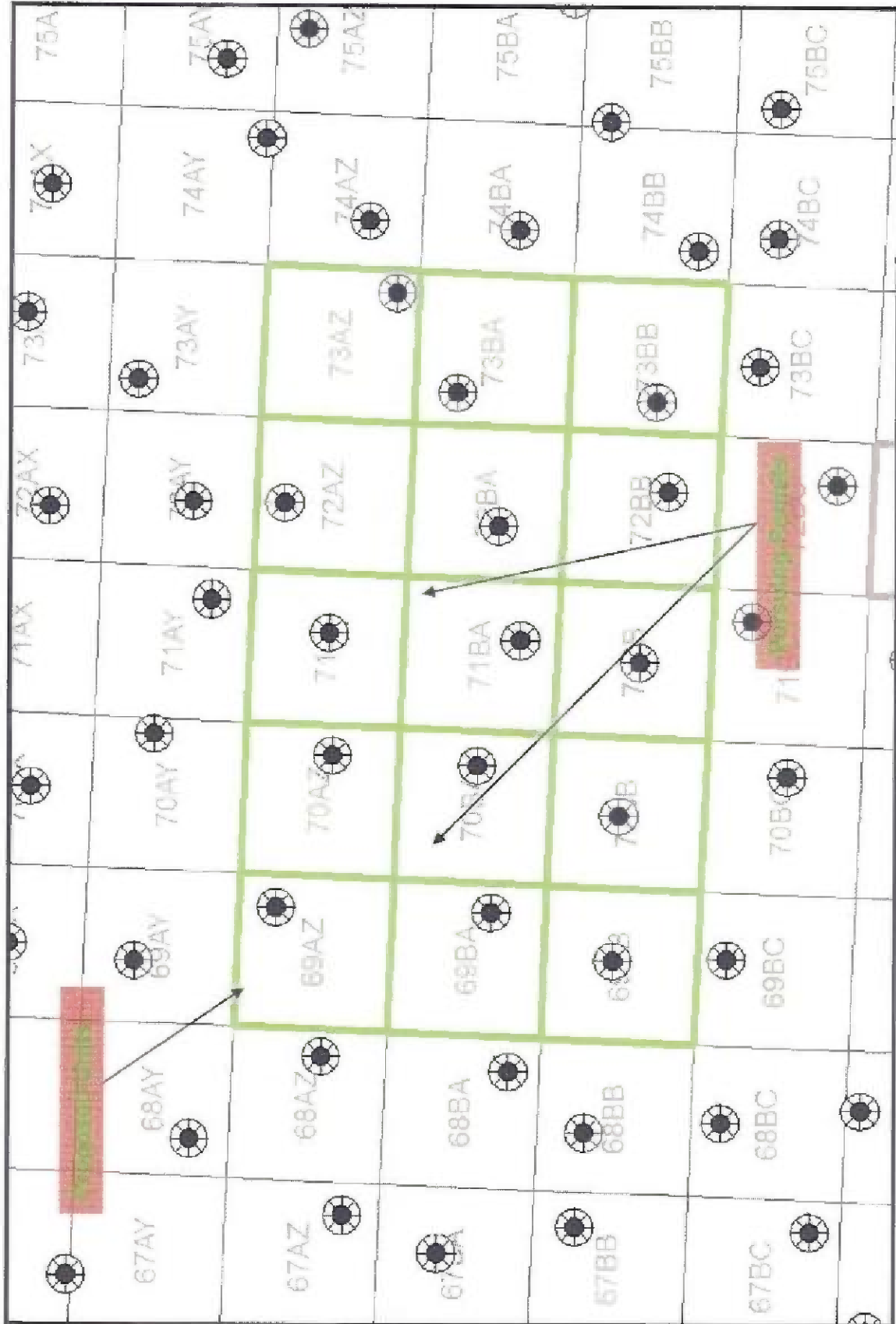
EXHIBIT K (pg 5)

Map View of Nora CBM Field



EXHIBIT K (pg 6)

Close up - Map View of Nora Increased Density Areas



Close up - Map View of Nora Increased Density Areas



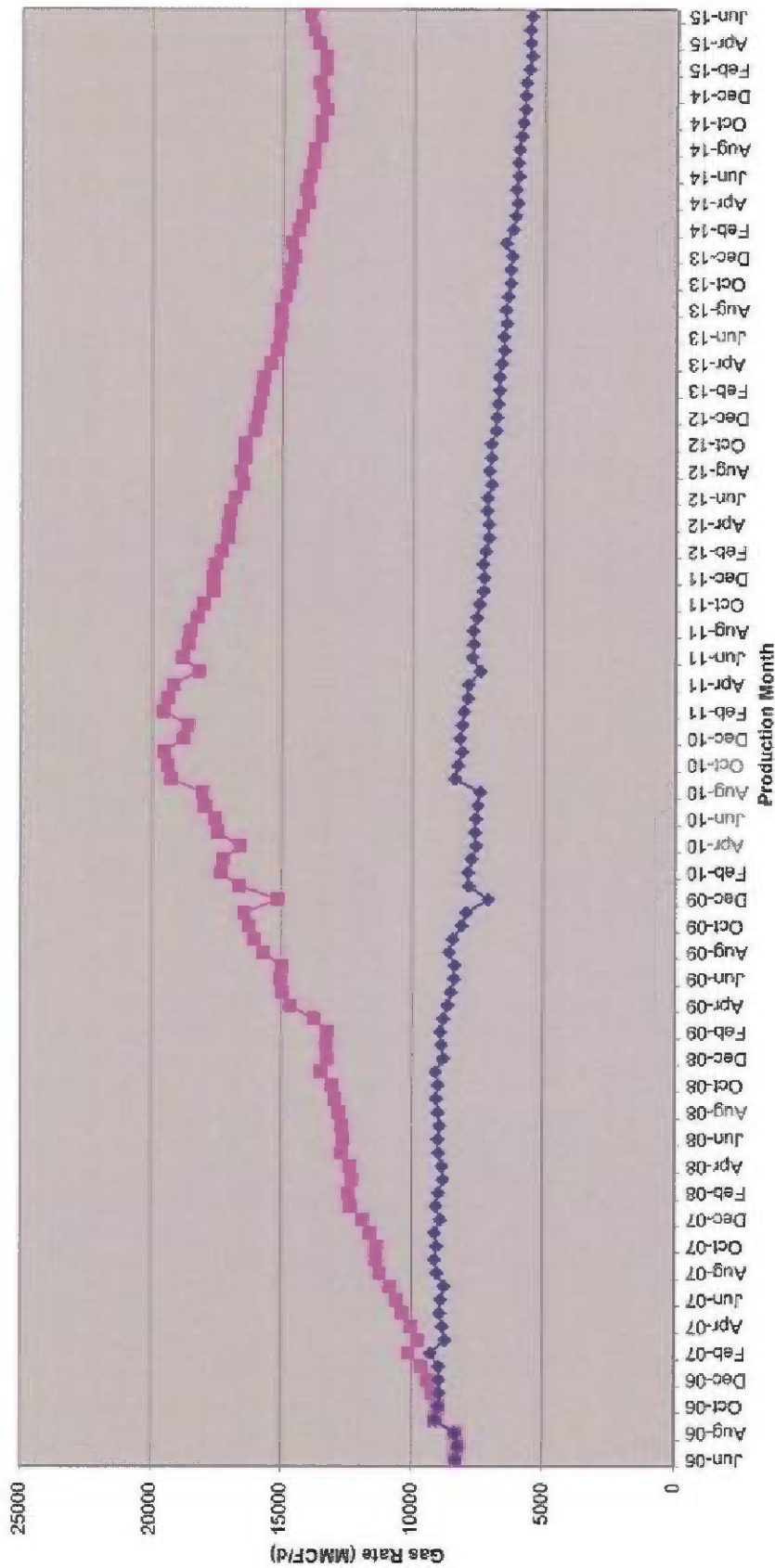
EXHIBIT K (pg 8)

Close up - Map View of Nora Increased Density Areas



EXHIBIT K (pg 10)

Increased Density Drilling Nora Field Thru 06-2015



Benefits of Increased Density Drilling

- Increase fracturing network promoting gas flow at low pressure
- Decrease de-watering time frame
- Increase recovery factor of reservoir
- Reservoir production achieved faster and more economical
- No significant negative impact to 1st well production, generally see improvement in existing production

Infill drilling from 2006 – 2014

Production represents 196 units

EXHIBIT K (pg11)

Summary of Infill Drilling

- Working Interest Owners, Royalty Owners, and the State will likely benefit by maximizing production
- Promote conservation of the gas resource and prevent waste by more effectively extracting the resource
- Allow for shared facilities such as roads, pipelines, etc. to help minimize environmental impact
- No correlative rights issues within proposed units

EXHIBIT K (pg 12)

Map View of Area Coal Mine Activity

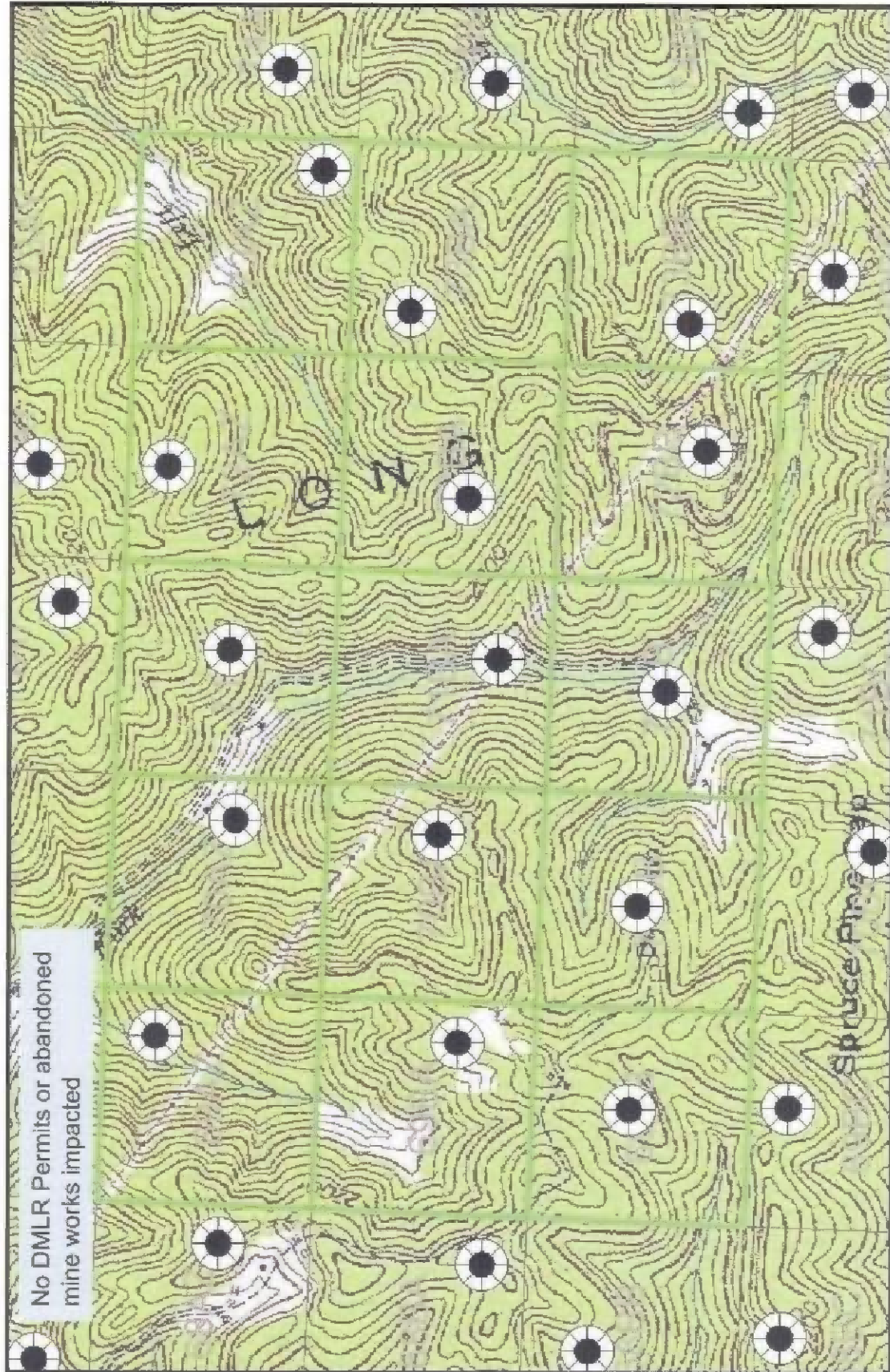


EXHIBIT K (pg 13)

Map View of Area Coal Mine Activity

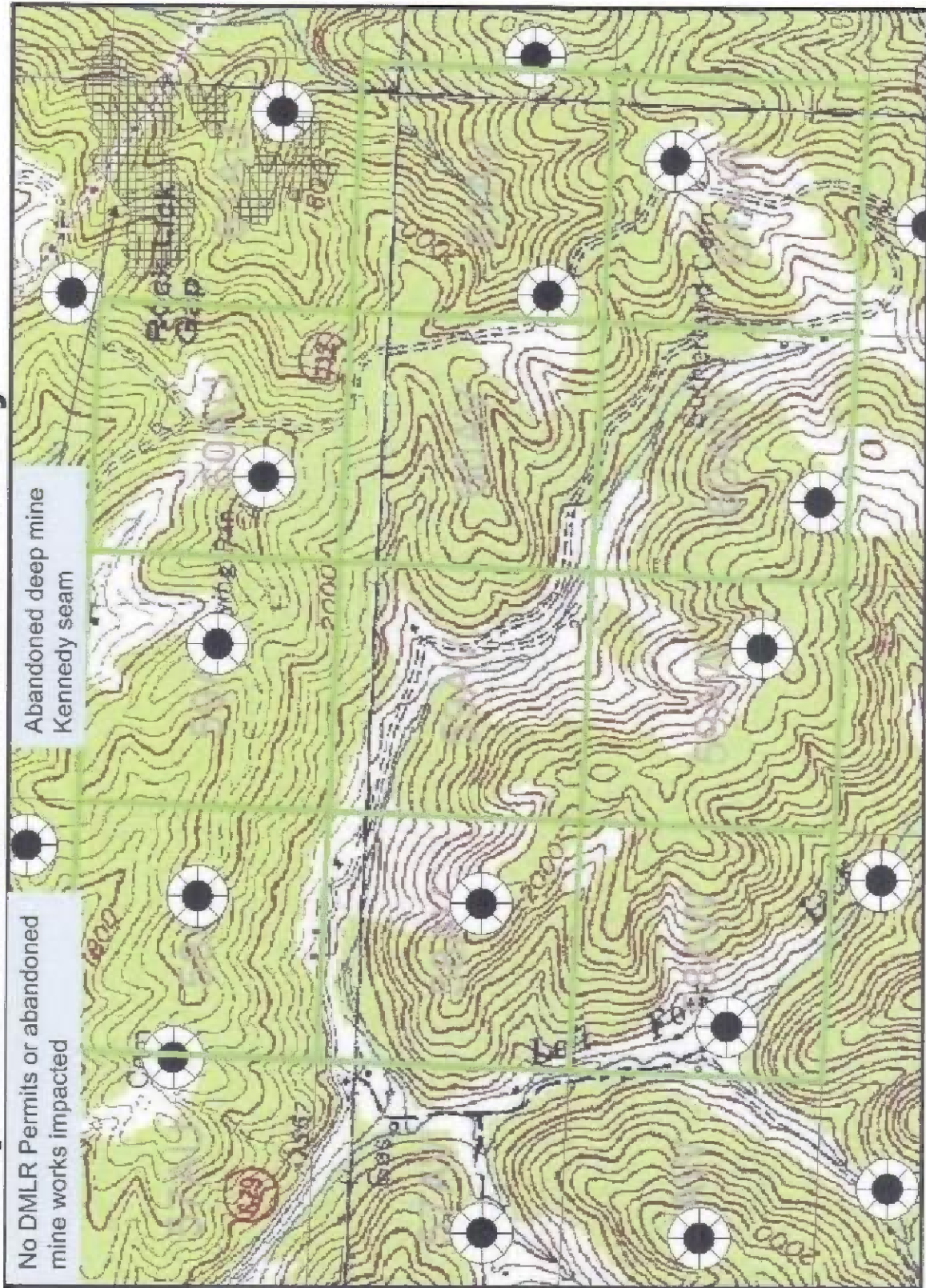


EXHIBIT K (pg 14)

Map View of Area Coal Mine Activity

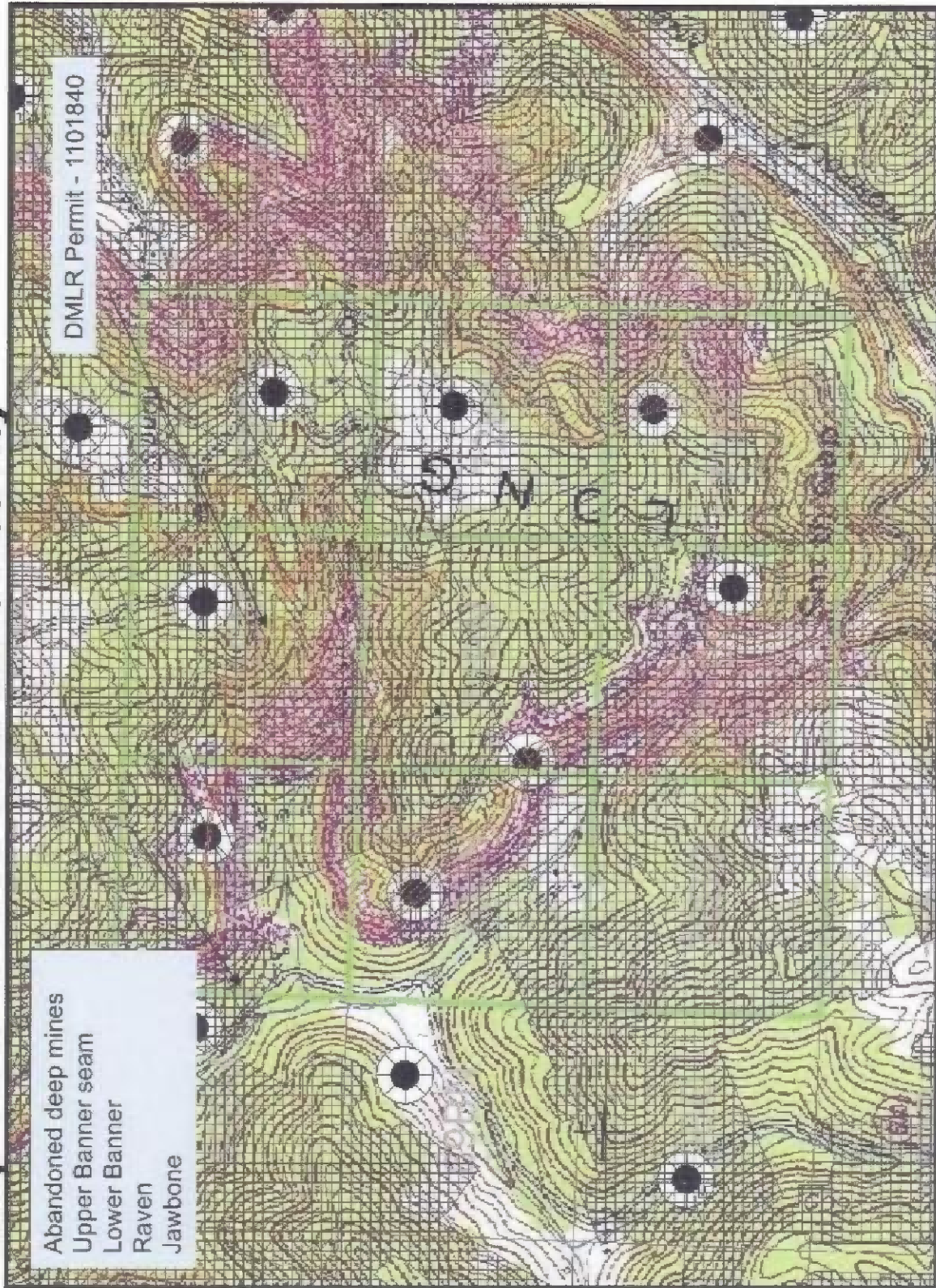


EXHIBIT K (pg 15)

Map View of Area Coal Mine Activity

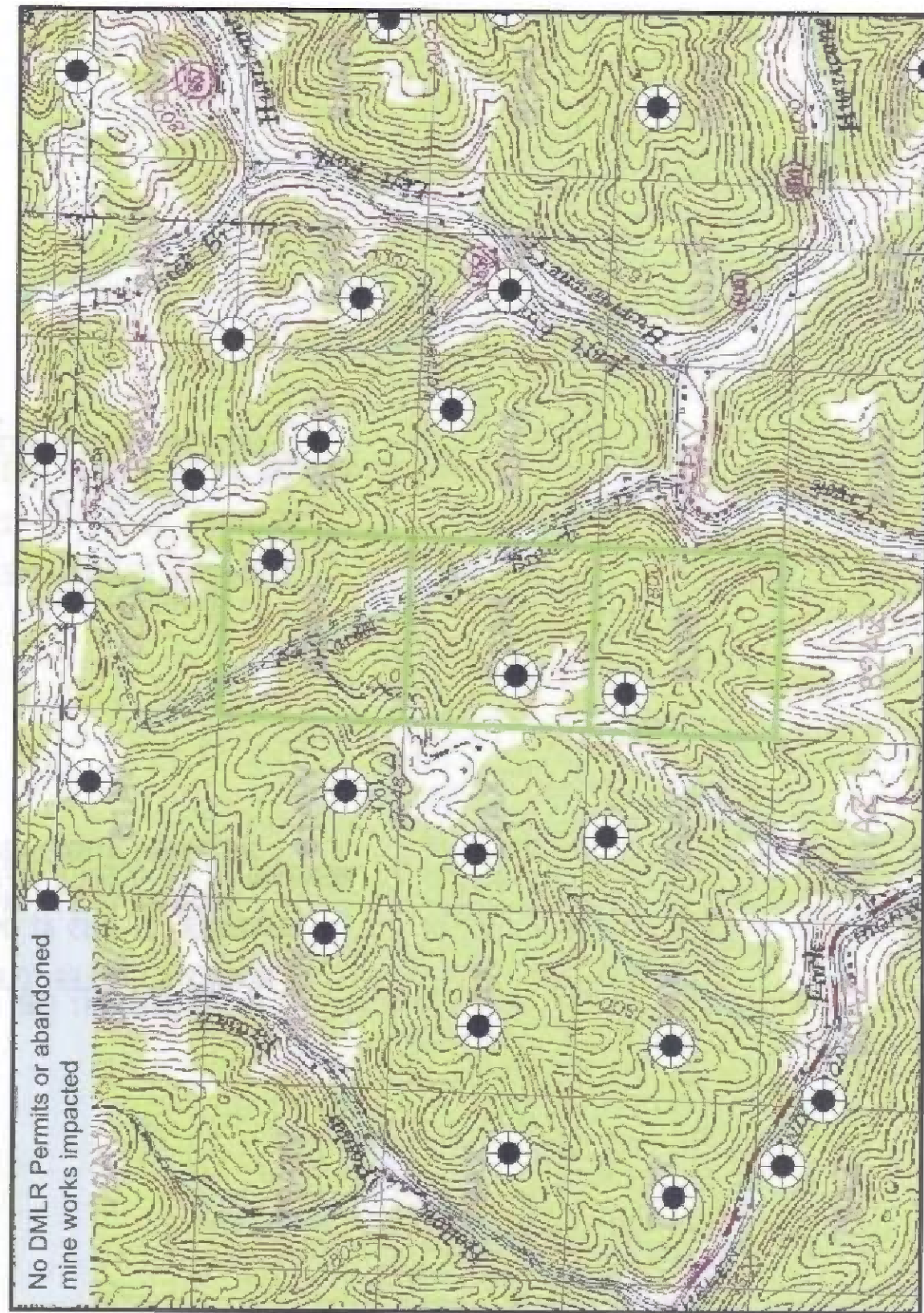


EXHIBIT K (pg 16)

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DICKENSON CN
SEPTEMBER 1, 2015 AT 12:23PM

RICHARD W. EDWARDS, CLERK
RECORDED BY: TLF

INSTRUMENT #150001424
RECORDED IN THE CLERK'S OFFICE OF
BUCHANAN COUNTY ON
SEPTEMBER 2, 2015 AT 09:51AM

BEVERLY S. TILLER, CLERK
RECORDED BY: GGB